# TURNING THE DAIRY COW OUT TO PASTURE

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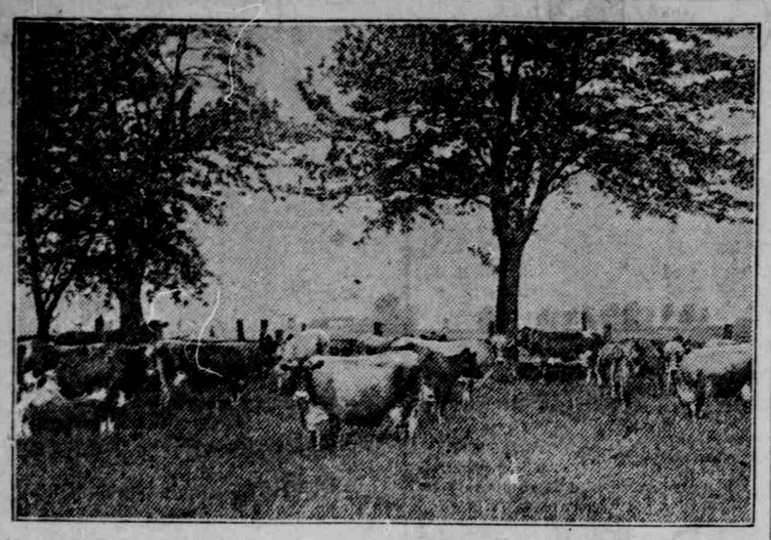


Kentucky Blue Grass Forms an Ideal Ration for a Dairy Cow When Supplied in Abundance and of Good Quality.

All dairymen welcome the time when the cows can be turned out on pasture, for it is then that the largest and best results are expected from each animal and the labor and expense connected with winter feeding are done away with.

Pasture is a term which means various things. It may mean the old virgin fields which have been allowed to remain in native grasses from year to year without any attempt at improvement through cultivation or rotation of better forage plants, or, it may mean the more succulent and nutritious crops of alfalfa, cowpeas, clovers, soybeans, oats, rye, corn and other similar forage plants. The amount of forage produced by native grasses is very small and if the price of land is high, it is poor economy to allow the soil to lay idle, since by a proper system of rotation, the production of feed material can be increased from ten to one hundred times and thus increase the economy in the production of the milk. Not only is the amount of forage increased, but it is in a better condition to be assimilated by the cow and turned into milk, because it is in a more active stage of growth, is more succulent than the native grasses, which begin to turn brown and dry up in the late summer and hence do not tend to keep up the flow of milk. As stated, a large variety of forage plants may be pastured, but the most nutritious of these and the most effective in making milk are the legumes, providing sufficient caution is exercised to prevent the bloating of the animals.

In changing from the winter ration of dry feed to the succulent grass, great care must be exercised, especially in the case of heavy milking cows, not to make the change too abruptly. The first periods of pasturing should be rather short, about one hour per day for the first few days, at the same time cutting down the roughage fed at milking time. About one week to ten days should be taken to make the complete change from dry feed to pasture. The young immature grass, such as we have in the spring, contains a large amount of water and a small amount of dry matter and it is almost impossible for a heavy milking cow to eat enough of such feed to supply the nutrients necessary for her normal functions.

This same fact is true during the entire pasturing season, to a certain degree and hence, the necessity of supplementing pasture with a grain ration. There is no question but that a cow will produce more milk if fed grain while on pasture, and, if a large yield is of more importance than economy of production, grain should certainly be fed. The feeding of grain during the pasturing period enables the cow to store up a considerable amount of body nutrients which are available for her use in producing milk when the change back to the winter ration is necessary. Cows which are fed grain along with the pasture will go into the barn for winter feeding in better condition than cows having received pasture alone.

Where only a small amount of grain is fed to the cow on pasture, corn is as well adapted as anything else where it is cheaper than other feeds, since, on account of the comparative narrow nutritive value of grass, the corn does not unbalance the ration.

In the case of heavy milking cows, where as much as five pounds or more of grain per day are required to supplement the pasture, then feeds containing more protein should be used, such as bran, gluten meal, oats or cottonseed meal, in combination.

Since as has been stated, the feeding of grain in connection with pasture is not the most economical method of producing milk, some successful dairymen have found it feasible and profitable to supplement the pasture with a feed of silage at the time of milking. The addition of silage compensates for any shortage in pasture and aids in maintaining a constant milk flow through the dry, hot months when pasture is naturally short and less nutritious.

# INDIANA AGRICULTURE

By G. I. Christie, Superintendent Department of Agricultural Extension, Purdue University.

Indiana agriculture is making rapid advancement. A study of present conditions causes one to feel that the demand of rapid and ever increasing population for a food supply at a reasonable price will be met by a greater and more economical production on Indiana farms. Farmers throughout the state are following improved practices and are getting results. In a corn growing contest the past season in Tipton county, thirteen farmers each grew more than 100 bushels per acre. This work is demonstrating the possibilities of corn growing. It is establishing a higher standard and no longer will the farmers be satisfied with a yield of 40 to 60 bushels. Of course, these farmers gave this ground extra cultivation and in some cases fertilized and manured it heavily, but in a statement following the contest the farmers stated that they had done nothing to secure these high yields that they could not afford to do on every acre of their corn land.

While Indiana has had in 1912 one of the largest crops of corn in its history and while the average yield per acre has increased more than five bushels in the past eight years, may we not hope that the work just started may bring returns in the immediate future.

During the past seven years a campaign for a better agriculture has been waged in Indiana by the press, the state agricultural associations, Purdue university and the United States department of agriculture. Much has been accomplished. Not only have the soils been improved and the crops increased but the industry has been surrounded by a more desirable atmosphere. The problem has not only been that of demonstrating how more money could be made on the farm, but also that of dignifying the profession, and developing a spirit and a life in the country that would enlist more of the young people in the agricultural work.

The nation as well as the state is awake to the need of agriculture and an attempt will be made this winter to secure needed assistance for the furtherance of movements now under way. On August 23, 1912, the house of representatives at Washington, D. C. passed unanimously the Lever bill, which provides for an appropriation for agricultural extension in each state and territory. The work provided for in this act would consist of practical demonstrations in agriculture and domestic science among the people of the state. The above bill was referred to the senate and was reported on favorably by the agricultural committee and now awaits the vote, which it is hoped, will be taken soon.

In line with this measure in congress, the agricultural and industrial commission of Indiana has recommended to the legislature the passage of a bill which will provide for an agricultural expert in each county of the state.

Already Mr. L. B. Clore is serving as county agent in La Porte county. He has an office in the courthouse, where farmers gather to consult relative to various farm problems. The county furnishes an automobile, and Mr. Clore spends four to five days each week visiting the farmers and the schools and giving such help as he can. Montgomery, Parke and Steuben counties are organized and will start county agents within a few weeks. Indiana has more than 220,000 farmers. These men are in active service and cannot go to college. The proposition is to take the best information to them and assist them in making a direct application of the principles in their every day farm work.

An increase of five bushels per acre in the corn crop of the state at fifty cents per bushel would mean an increased annual income of $12,500,000. Indiana has 600,000 dairy cows. If the net income of this herd could be increased $10.00 per cow, it would amount to $6,000,000. During 1912, Indiana lost from cholera alone more than 500,000 hogs, valued at $4,000,000. This loss could have been largely avoided by care and attention on the part of the farmers. Similar facts and figures could be shown in animal husbandry, horticulture and other lines of agriculture.

# DISEASE OF POTATOES

## Dry-Rot Fungus Causes Blight and Wilt of Crop.

### History of Fusarium as Field Trouble Is of Comparatively Recent Record—Preliminary Symptoms Are Green Color.

(By T. F. MANNS.)

The dry rot of potatoes has long been known as a storage trouble. At intervals since 1824 there has been found associated with this rot by different investigators a fungus of the genus Fusarium, which has been variously designated, but the history of the disease as a field trouble is of comparatively recent record.

On badly infected soils the disease is characterized as follows: The stand is uneven, though few of the hills are missing. The early growth

Showing Premature Dying in the Field on an Area Which Has Become Infested With Fusarium Disease.

is somewhat slow. When the plants reach a height of 10 to 14 inches, there is an apparent cessation of growth. The first indication of the disease is usually conspicuous at this time. The preliminary symptoms are a light green color of the foliage, particularly the lower leaves; this is accompanied during the heat of the day by a partial wilting and an inward and upward rolling of the upper leaves. The color gradually changes to a sickly yellow, which slowly and evenly covers the affected vines. The wilting and rolling of the leaves extends to all parts of the affected plants. As the disease progresses the field takes on a mottled yellow to light green color. The growth of the foliage is greatly restricted, the wilting becomes more pronounced and there is associated much tip-burn owing to the failure of the leaflets to fully recover at night from the wilt of the mid-day. Occasionally hills will show only one or two vines afflicted. Plants which early succumb to the disease pull up easily, manifesting a badly rotted condition of the root. As a rule the blighted stems do not fall, but remain quite erect, except for the drooping top.

There is much evidence to indicate that many growers are practicing potato rotations of too short a duration. Most of such growers have attempted to maintain a three-year rotation of wheat, clover and potatoes, but longer than a three-year rotation should be practiced.

Sick fields should not be planted in potatoes again for at least five or six years, and even longer time may be required to work the parasitic fungus from the soil. Grass and grain crops will undoubtedly eliminate the fungus from the soil quicker than will manuring and cultivated crops.

The work of the dry-rot in improper storage causes an excess of

Showing a Potato Rotting in the Soil From the Fusarium Disease.

moisture, due to the drying up of the rotting tubers. This excess moisture condition, together with the added facility with which bacteria and decay fungi may enter the already infected tubers, brings about much complication in the form of soft or wet rots, for which the Fusarium disease is primarily responsible. Under the average cellar storage conditions it is quite safe to estimate the loss from dry-rot and its complications at from one to five per cent.

### When Soils Cease to Produce.

The trouble with soils when they cease to produce as they did when new is not that elements of plant food are actually exhausted from the soil, but the necessary forces for the liberation are exhausted. One of these forces is bacteria. It is estimated that in the common soil there are 150,000,000 bacteria to the ounce. These bacteria must have for their food, humus, then they will liberate food for the growth of plants. To be a good farmer one needs to grow legumes and other cover crop plants to turn under for humus, and to encourage these beneficial bacteria to perform their functions in the soil.

### Success Further Down.

In many instances the yield of gardens can be increased by simply getting down a few inches deeper with fork or spade. The French gardeners can give Americans many lessons in this respect. The soil should be pulvertized, but work should not be commenced too early. Plowing the ground while it is too wet will cause the soil to pack in solid lumps. Good land is almost ruined in this manner.

# VALUABLE CROP FOR SWINE

### Hogs of All Ages Relish Cut Alfalfa When Fed in Slop and Make Excellent Growth.

I have found that alfalfa makes one of the most valuable crops for the Log grower, whether it is pastured or cut up finely and fed with ground feed, writes John H. Dunlay in the Farm, Stock and Home. Last winter when middlings were selling around $30 per ton I cut alfalfa in a cutting box and fed with the warm slop to all my hogs that did not have access to blue grass or the rye fields. Hogs of all ages relished the cut alfalfa when fed in the slop and they made a fine growth.

The alfalfa was cut to about one-half an inch in length and then scalded before being mixed with the ground feed. I usually put the cut alfalfa in a large galvanized tank and pour boiling water over it. It is then left to stand over night and if covered will be warm the next morning.

I want to purchase a feed grinder that will grind alfalfa into a coarse meal, and if I do this I think the hogs will find it even more palatable. Alfalfa contains about the same amount of protein as found in the best middlings and at the same time it seems to act as a tonic for all the hogs that have access to it.

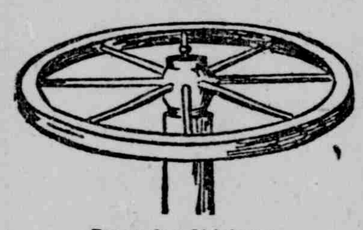
It is not too late to sow alfalfa and it will pay you to sow at least a small patch even if you only feed the hogs the cured hay during the winter months, when they do not get green feed. When there is a good supply of alfalfa, it makes the best of forage crops for hogs of all ages. Alfalfa, when pastured, should be allowed to get a good start and should not be pastured the first season. In this way it gets a good start and is able to stand pasturing better the next year. It is well to ring the hogs or take them from the alfalfa field if the ground gets wet or muddy.

# CHEAP ROOST FOR CHICKENS

### Discarded Cart Wheel May Be Made to Serve Purpose—No Trouble in Cleaning House.

(By G. DOVER.)

Take a cart wheel and stab the axle into the ground, or cut the axle in two, bolt it to a post and set the post in the ground. When the chicken house needs cleaning, all you need to do is



Roost for Chickens.

to lift the wheel off and it is out of the way. Then, too, if there is a chicken on the other side from you that you wish to catch, just turn the wheel around.

# SUMMER RATION FOR HORSES

### Good Combination Is Corn, Bran and Little Oilmeal—More Carbohydrates and Less Protein.

If corn must be fed to the horses, grinding it will not pay, unless the horses have poor teeth, in which case it might be advisable. Feeding the ear or shelled corn would be the more desirable method of feeding.

Crushed corn and cobmeal is not as good because of the cost of crushing, and the amount of food value secured from the cob is so small that it does not make up for the energy required to digest so much crude fiber.

A combination of corn, bran and a little oilmeal make a good summer ration for horses. Feeding a 1,000-pound horse about ten pounds of corn and three pounds of bran per day would be equivalent to fourteen pounds of oats, although it contain a little more carbohydrates and less protein, thus making a little wider ration. A small amount of oilmeal would offset this, however.

# GENERAL FARM NOTES

Rotate your garden crop.

Give the radishes just a little shade.

Plant early smooth peas. Alaska is a good early variety.

The farmer is known by the amount of clover seed he sows.

A set of steel drills will soon pay many times their small cost.

One way to increase the profits of your farm is to build a silo.

Fine cabbages follow beans but do not grow well after potatoes.

Alfalfa pasture and hogs make a combination that is hard to beat.

Sweet peas should be planted as soon as the ground can be worked.

Do not plant your potatoes in the same old place and invite the scab.

Save muscle and time when cutting bands by having a keen-edged knife.

Plant radishes remote from the track infested by the wire-worm last year.

When short of room, train squash vines on trellises or wire fence; they are good slimbers.

Plant cucumbers in level rows; in dry seasons they do better than when grown in elevated beds.

Onions, beets, spniach, radishes and lettuce may be sown as soon as the ground can be worked easily.

Lettuce should not be where the soil is too dry or light. Parsley will stand such soil a little better.

# DRESS NEVER CHANGES HERE

### Sioux Maidens Living on the Pine Ridge Reservation Wear Same Style a Lifetime.

Sioux Falls, S. D.—American fashions versus Parisian! Why go abroad for clothes which only wear one season when you can get a dress like the one shown in the accompanying picture, which will wear a lifetime? Long before the young woman in the illustration had attained sufficient stature to fill out the costume properly the materials for it were being prepared. The owner of this "confection" is a young Indian girl of the Sioux nation who lives on the Pine Ridge reservation in Shannon county, South Dakota. This is doubtless her holiday regalia and it is doubtful if she would trade it for the latest model from the Rue de la Paix. A beaded costume

Sioux Belle, in Her Sunday Best.

like the one pictured is a matter for serious consideration by the modistes of the tribe and months were probably spent over the beadwork of the bodice alone, while the doeskin for the skirt had to be worked over for weeks by the old women tanning experts in order to attain the velvet-like quality necessary for a garment of this description. The "shopping bag," too, while not of a late model as our fashions go, will nevertheless be in excellent taste for years to come in this "land where fashions never change." Changes in styles would indeed be superfluous in a country where it takes months to complete a single garment, but which when made will wear for a generation or two. The girdle with its pendant—reminiscent of Cleopatra—is made of heavy leather, also practically indestructible, covered with heavy silver disks beaten out by hand. It is of prime necessity to be of athletic build in order to wear this variety of clothing successfully, as the beadwork weighs something like ten pounds to the square yard. This "cloth" is made by fastening the beads in parallel rows on a backing of heavy buckskin. The blanket in the background is of Navajo make from New Mexico.

# KANSAS CO-EDS ARE HUSKY

### Taller, Heavier, and With a Much Greater Lung Capacity Than Young Women Elsewhere.

Lawrence, Kan.—Kansas college girls should be able to talk longer, yell louder and for a longer time than any other girl students in the United States, according to Dr. Margaret Johnston of the department of physical education of the University of Kansas.

The Jayhawker co-ed is also taller and stronger than her eastern sisters. The average Kansas girl is about one-fourth inch higher than the Wellesley young woman. The average weight of the girl at Wellesley is 116 pounds, at Kansas 117.

In strength and lung capacity the Kansas girl reigns alone. The average capacity of the German girl is 147 cubic inches; Oberlin girls can swallow 141.2 inches of ozone and Wellesley girls 150 cubic inches. The Kansas girl tests 165, which is far above the average for the United States.

Plans were formed recently for the establishment of a girl's baseball league among the different sororieties here. Margaret Johnston, director of women's athletics, is expected to start the co-eds in the game within a few days.

# MAN DODGES COUGAR'S JUMP

### Animal Then Follows Him Half Mile to His Home—Lamp Used as Weapon.

Shamokin, Pa.—As Elmer Gross was returning from work at the Cameron colliery a catamount, large and heavy as a bulldog, sprang at him from the bushes fringing the road.

Gross sidestepped the beast and jerking a lighted miner's lamp from his hat, turned the blaze into the face of the cat, which ran away, but soon returned and followed Gross a half-mile toward his home at Tharptown.

Gross hurried into the kitchen and got a rifle, but when he came out the cat had disappeared.

### Crazed at Sight of Corpse.

Wilkes Barre, Pa.—Samuel Mumma, aged forty-five, of Wilkes Barre, Pa., went insane while viewing the body of his brother-in-law, Guyton Brudoll, who had been killed in the mines. As soon as Mumma caught sight of the features of his dead relative, he uttered a maniac's scream and it required several men to hold him. He was taken to an asylum.

# HOOSIER NEWS BRIEFLY TOLD

South Bend.—After lying hidden for more than thirty years and having been the object of a search covering almost twenty years, papers which may mean a fortune for the descendants of L. S. Watkins, prominent financier, who died in 1880, have been recovered.

The papers consist of stocks in various oil companies organized in the early history of the oil industry in the United States, and have been turned over by Lewis C. Landon of this city, grandson of Watkins, to the Merchants' National bank to ascertain their value. They will be forwarded to New York.

Wrapped in the packet of parchment which was accidentally discovered in a castaway trunk in St. Louis, is a story of a fortune won and lost and gained again. The par value of the stocks is approximately $125,000. Besides Landon, who is a prominent druggist of this city, other relatives interested in the discovery are George Landon, his brother and Mrs. Joel Parker, an aunt, both of St. Paul, and H. C. Watkins of South Bend, a son of the financier. The discovery is largely the result of the efforts of Lewis Landon, who became interested in the search about nineteen years ago, while visiting his grandmother in St. Louis.

While glancing over an old diary Landon became acquainted with the details of his grandfather's early operation in the oil business.

Watkins was one of the first to enter the development of this industry and is said to have been one of the first partners of J. D. Rockefeller.

Wabash.—Esta Cook, postmaster at Ijamsville, near here, made a confession to Inspector Piatt that he had forged the names of prominent and wealthy residents of North Manchester, Laketon and Wabash to notes in an attempt to collect $2,000. Bankers here and at Roann, where the paper was presented, refused to advance the money. As the negotiations were carried on through the mail under an asumed name some time was required in establishing the man's identity. The inspector informed Cook his resignation would be demanded at once. His accounts as postmaster were found in good shape.

Bloomington.—This city sent between $2,000 and $2,500 to other counties for the aid of flood sufferers, according to a final statement just made by Secretary Charles H. Springer of the Bloomington Commercial club. At a special meeting of the Monroe county council appropriated $2,334.89 for the construction of bridges and other public work made necessary by the flood.

Petersburg.—The jury, after deliberating less than two hours in the case against John Black for attempted wife murder, returned a verdict of guilty. Black struck his wife on the head with a gas pipe, inflicting wounds that came near causing her death. He is a hopeless cripple, and for this reason the jury was lenient, fining him $25 and sentencing him to sixty days in jail.

Terre Haute.—Charles Laughlan, thirty-one years old, a fireman, was fatally and Redmond Clements, twenty-eight years old, a laborer, seriously burned in a dust explosion at the Standard Steel works. Laughlan was burned when a blast from the furnace of the boiler ignited a large cloud of dust that had dropped from a dust collector which was being repaired.

New Castle.—Dr. F. A. Bolser, assistant state veterinarian, has successfully experimented with a sample of pneumonia serum sent him by the Rockefeller institute of New York, and is in a position to make the assertion that a great advancement has been made in the treatment of the disease in both humans and animals.

South Bend.—Ben Kahn, convicted of burning his store here, was sentenced to from two to twenty-one years in the Indiana state prison. A motion for a new trial was overruled, but Kahn's plea for bail pending an appeal to the supreme court was granted. His bond was fixed at $10,000.

Shelbyville.—Alleging that her husband held her and tried to cut her throat with a knife and that he had driven her from their home in Fountaintown on several occasions by his extreme cruelty, Mrs. Sarah F. Inlow sued Samuel A. Inlow for a divorce in circuit court here.

Wabash.—While engaged in papering a room, William Vanvionkef complained of being tired, and sat down in a chair to rest. Ten minutes later Dr. W. J. Grossnickle, at whose home he was working, entered the room and found the man dead.

Jeffersonville.—Fire which destroyed the Acme elevators and flour mill here caused a loss of about $110,000. There was $65,000 insurance on the structure, principally in the Millers' Mutual company of Milwaukee. Spontaneous combustion is supposed to have been the cause. The blaze gained great headway. But one or two of the walls of the building are left standing. During the fire two boilers exploded and parts of them were found later 200 feet away. Sparks were scattered to nearby buildings, but none was damaged.